

COST *and* MANAGEMENT

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J. N. Allan, R.I.A., Secretary-Manager and Editor

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• EDITORIAL •

Relaxation of Wage and Price Controls

The first step in price decontrol was taken with the lifting of the price ceiling on certain goods imported from Britain and 15 other Allied nations. This was quickly followed by the removal of the price controls affecting some 300 items as well as the relaxing of wage control orders. It has been made abundantly clear that this move is purely experimental and that the controls will immediately be reimposed should prices of items affected rise unduly. It will be remembered that this procedure of decontrol is in accordance with the plan outlined last October by the Chairman of the Wartime Prices and Trade Board. It was then pointed out that decontrol would be gradual and would at first affect only those items which were in the luxury or near luxury class.

It must be admitted that the W.P.T.B. has been very successful in controlling prices and confining the increase in cost of living to comparatively small proportions. While prices have risen in Canada 19% since the war, it is a notable achievement when compared to 30% in the United States and 31% in Great Britain. This is all the more remarkable when it is recalled that noted economists stated in 1940 that price controls could not be maintained successfully for any extended period. It is highly important that this anti-inflationary program be continued until such time as there is such a sufficiency of goods that competition can take over control.

Despite extreme care in the removal of controls, there must inevitably be some rise in prices but to what extent will largely depend upon the pressure applied by labour for higher wages. In view of this trend, accountants would be well advised to consider very carefully any statements they prepare which are projected to cover future operations. Every precaution should be taken to provide for possible increase in costs. We are entering a very hazardous period for it has been said that the problems in relaxing controls is far more difficult than in exercising the restrictions in the first place.

So You Want Security

For the past several months, we have heard on the radio and read in the papers, a great deal about Security. There has been the Security of Nations as worked out at the San Francisco Conference, the Labor Unions across Canada and the United States are endeavoring to obtain Union Security.

EDITORIAL

Security is something that we all desire but comparatively few of us obtain, because it depends entirely upon how much we want it and how much we are willing to do by way of sacrifice to obtain it.

There is no political party, society or union that can legislate one into security, no more than they can legislate you into heaven.

Today, under the shadow of the Great Tree of Providence, set millions and millions of men and women waiting for Lady Luck to drop something in their laps. But men grow long white beards and women's faces wrinkle as the Grim Reaper gathers them in before that something drops. Lady Luck has absolutely no part in the success one obtains in this world. The amount of this world's goods one receives in a lifetime, rests entirely in our own two hands to appreciate or depreciate at will.

If one could know the number of men over fifty years of age who are utterly dependent upon some one for their very existence, it would be appalling. In most cases, this could have been avoided had they planned their lives at an early age. Most men devote more time planning a chicken coop or a garage than they do their lives.

If we want Security in the future, we must plan for it to-day. Hard manual work may make you a living but security comes only from a combination of mental as well as physical efforts.

Many of our business leaders had very little education as we know it today, but acquired it after they had started out to work. The lack of education is a serious handicap in today's business world, because whatever the profession, trade, or calling, one follows, a man must be complete master of all its phases. Progress can be very fast today because the business world moves very quickly. All men must have a certain amount of intelligence and brains or he could not hold down any kind of job. The Good Lord gave us all the same physical equipment with which to start life, we have the same number of fingers, eyes, toes etc., and since the Creator did this with our bodies, is it not reasonable and logical to suppose that He did the same with our mental equipment. This is not only logic, but a fact proven by the Simon-Benet tests for Morons, which showed conclusively that even when the mind was below par, none of the faculties or qualities were missing. The deficit was almost solely in the degree of development. That is the big thing the degree of development. There is only one difference between the chief accountant and the clerk just training.

It is the law, the inevitable and unescapable law that all things in this world either good or evil, come either as a reward or a penalty for our acts. The penalty for over-eating is indigestion; the reward for study is a better trained mind, more knowledge, a better position and more of this world's goods.

So if you really want security, choose your field, your course of study and go to work. A short time spent in study each day will pay large dividends in the future.

Do not depend on any Government, Society, Unions or group of people to provide you with Security—Make your own.

COST AND MANAGEMENT

New Members

Fort William-Port Arthur

Frank O. Coles, Mahon Electric Co. Ltd., Fort William

Hamilton

G. F. Agnew, Thompson Plumbing Co. Ltd.

D. T. Barber, Goodyear Tire & Rubber Co.

Kitchener

Wilfred J. Rellinger, Canadian Transformer Company, Waterloo

Harry Stockfish, Werlich Manufacturing Co. Ltd.

Charles N. Fouse, Kralinator Products Ltd.

London

A. R. Anderson, Kelvinator of Canada

Montreal

I. G. Gaudard, Continental Can Company of Canada Ltd.

Robert Stewart, Continental Can Company of Canada Ltd.

Thomas G. Sweeney, 5981 Cote St. Antoine Road

Robert Leatherbarrow, Benallock Press Ltd.

Allan B. Rosser, 2261 Prud'homme Avenue

John T. Evans, 1836 Bayle St.

Toronto

L. Sutcliffe, Canadian Wirebound Boxes Ltd.

Charles L. Wilson, Simmons Ltd.

A. S. Levitt, C.A., Wilton C. Eddis & Sons

K. E. Greenwood, C.A., Wilton C. Eddis & Sons

R. W. Greene, C.A., Wilton C. Eddis & Sons

H. C. Rogers, C.A., Wilton C. Eddis & Sons

G. R. Easton, Toronto Hydro Electric System

R. W. Bedford, Radio Manufacturers Association of Canada

CHAPTER STANDINGS FOR FERNIE TROPHY

	Basic Points	Increase in Senior Members	Increase in Senior Members	Points	Percentage Increase
London	73	3	27	33	45.2
Calgary	81	4	20	28	34.6
Quebec City	60	6	7	19	31.7
Bay of Qunte	38	5	—	10	26.3
Kitchener	93	8	5	21	22.6
Montreal	387	33	15	81	20.9
Hamilton	243	2	39	43	17.7
Vancouver	125	3	16	22	17.6
Edmonton	93	3	9	15	16.3
Ottawa	68	3	4	10	14.7
Niagara	75	—	11	11	14.7
Windsor	132	2	9	13	9.9
Fort William-Port Arthur	77	—	6	6	7.8
Toronto	388	3	3	9	2.3

Chapter Notes

CALGARY

Our first meeting of the year 1946 which was to have taken place on the 9th January was delayed as our regular "meeting place" the Club Cafe was completely gutted by fire during the early morning hours of that day. The loss was very extensive and we take this opportunity to express our condolences to the "Club" management and hope arrangements can be made to rebuild their premises in order that they again may open for business at the earliest possible date.

We were able to make tentative arrangements with the Avenue Grill to hold meetings for the time being and our "delayed" meeting was held in their premises on the 23rd January. Our Chairman, Mr. Pat Bowsher, R.I.A., gave a brief resume of the progress made by the Chapter during the calendar year after which the subject "Accounting Procedure to Prevent Fraud" was discussed. This discussion was led by Mr. Charlie Reaper, R.I.A., vice chairman of our Programme Committee, and proved very interesting and educational as the majority present took part. A total of 32 members and visitors attended the meeting.

HAMILTON

The January meeting was one of the highlights of the year's program when the Hamilton Chapter entertained the Toronto Chapter. This is an event that is looked forward to by both Chapters each year and never fails to be a great success. The Chairman of the Program Committee, Mr. Jack Farnworth excelled himself when he arranged for Mr. John A. Marsh, Red Cross Commissioner for the Province of Ontario, to speak. Mr. Marsh spoke on the subject "How Can the Individual Help Make International Organization Effective", and upheld his reputation as being one of Canada's finest speakers. He made it abundantly clear that each individual has a certain responsibility in promoting international good-will and proceeded to prove that this was not a statement of an idealist.

Afer the address, Bill Baillie presented some very excellent entertainment.

KITCHENER

Two speakers addressed the January meeting of the Kitchener Chapter which was held at the Old Mill, Kitchener-Preston highway on January 16. In the absence of the chairman, E. C. Codling of Fergus, last year's chairman, Walter Jardine of Preston, occupied the chair.

W. Courtney McEwen of Kitchener, spoke on the subject "Business Forms: Tools of Modern Industry," during which time he illustrated his remarks with latest business forms and equipment.

Mel Walker of Kitchener, vice-chairman, "pinch-hitted" for J. C. Buchland of Kitchener, who was to have spoken on "The Use of Office Machinery to Save Time." Mr. Buchland was unavoidably absent and Mr. Walker graciously consented to fill out the program. His subject was "Accounting for the Valuation of Inventories" which proved highly interesting. Both addresses were followed by a question and answer period.

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Four new members were introduced by Earl Gillespie of Waterloo. They were: W. J. Rellinger, Kitchener; Harry G. Stockfish, Preston; C. N. Fouse, Preston, and G. Keith Watson, Fergus.

The speakers of the evening were introduced by Secretary-treasurer V. Buchanan of Kitchener, and Alfred Pautler of Preston, while the appreciation of the Society was expressed by Norman Barfoot of Galt, and Gordon Good of Kitchener.

LONDON

The January meeting of London Chapter was held on the 17th of the month at Hotel London, Mr. C. E. Costain, chairman, presiding.

We were very fortunate in securing Lieutenant-Colonel Robert G. Peat as our guest speaker, who was introduced to the meeting by Mr. C. J. England. Mr. Peat's topic was the method of Supervisory training, and was very clearly explained.

There were twenty members and visitors present.

At the conclusion, Mr. Peat was thanked very heartily by the chairman.

OTTAWA

The January meeting of the Ottawa Chapter was held on Thursday evening, January 10th in the Cafeteria of Hughes-Owens Limited. The Committee arranged for a combined business and social evening and the event was very successful.

The guest speaker for the evening was Mr. Charles Everett of R. L. Crain Limited who was ably assisted by Mr. Clifford Graham of the same firm. Three motion pictures were screened in connection with the talk and these helped in no small way to make Mr. Everett's paper an exceptionally interesting one. The subject chosen was "The Use of Forms in Business" and the films were titled "Work Simplification", "All the Tools and Diagnosis" and "Paper Work and Working Papers".

The guest speaker was introduced by the Chairman, Mr. R. Hartin, and thanked by Mr. Frank Wood.

The meeting included the usual dinner and, after the speaker had concluded his remarks the members gathered in a social manner, playing cards and mixing together.

All present voted it quite a success and it is hoped that at least one further meeting of a similar sort can be arranged during the present winter season.

VANCOUVER

Mr. J. C. Taylor, B.A., C.A., Associate Professor, Department of Commerce at the University of British Columbia, and also one of our members, addressed the regular monthly meeting of the Vancouver Chapter held on Jan. 10th. That the meeting was an outstanding success was the expression of opinion everywhere in the audience. Mr. Taylor chose for his subject "Auditing and the Cost Record". He quoted from various parts of the Company's Act and drew the highlights of his talk together to the interesting conclusion which outlined the relationship between the Cost Accountant and the Auditor. This is the first talk of this nature we have had and we found it very refreshing. We are looking forward to seeing it in print.

CHAPTER NOTES

A most pleasant surprise was the presence of three ladies in the audience, whom our Chairman welcomed with true Southern hospitality, ably assisted by our friends Curry and Charlie, and more especially Ron, who, we are sure spent a much more enjoyable evening than they would have done, had it not been for the presence of our three fair visitors.

The attendance prize drawing was a marked feature, and if the news of what the prize was to be leaked out before the meeting, that may have had something to do with the extra large attendance. Anyway Orlo Redpath was the lucky winner, and we hope the medicine was a wonderful cure for a cold. The prize was donated by Norman Terry.

As is the custom at our meetings all new members and guests were introduced by the Chair.

Murray Gilmour, Chairman, outlined the percentage of increase in attendance and membership during the current season.

A short report was given by the Provincial Secretary Treasurer, Clif Davis, dealing with Hamilton and Provincial inter-correspondence and urged the co-operation of every member towards the winning of the Fernie Trophy.

A short talk was also given by Richard Girling, another member, on the necessity of sugar rationing, which was very enlightening and was well accepted by all.

We hope to be addressed shortly by Mr. Wynn of the Compensation Board and also by one of the staff of the Unemployment Insurance Commission.

VICTORIA

At our monthly meeting on 10th instant, we had the pleasure and profit of listening to a most interesting and instructive talk by Mr. F. G. Coburn, 2nd Vice President of the British Columbia Society, on "Controlled Job Costs".

The audience of members and invited guests, though smaller than we had hoped for, was very appreciative, and the consensus of opinion was that the speaker had presented his subject in a very clear and concise manner.

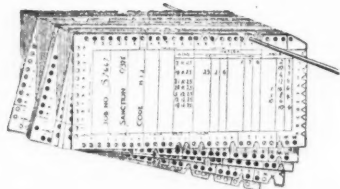
The address ended with a story which could hardly be classified under the heading of Controlled Job Costs but which was nevertheless received by all with much delight.

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Personals

Mr. Norman MacKinnon, R.I.A., of the Vancouver Chapter, has joined the staff of the Restmore Manufacturing Company, Vancouver. Our very best wishes are extended to Mr. MacKinnon in his new field. We know it is but another step in his continued progress.

Congratulations are extended to Mr. J. G. Renaud, of Montreal, on his re-election as President of the Quebec Chain Retail Distributors Association. This will be Mr. Renaud's fourth term in this office. Mr. Renaud is a member of long standing and a former director of the Montreal Chapter and apart from his association duties, he is president of J. B. Lefebvre Ltd.

It has just been announced that Mr. W. L. McMahon, R.I.A., of the Hamilton Chapter, has been appointed Works Manager of the Hamilton Cotton Company. This appointment comes after many years of service with his Company and our heartiest congratulations and best wishes are extended to him as he takes over his new position.

Mr. McMahon has been a member of the Society for over fifteen years and after serving in various offices of the Hamilton Chapter is now on the Council of the Society of Industrial & Cost Accountants of Ontario and the Board of Directors of the Canadian Society.

Examination Dates

The following are the dates set for the Spring examinations:

Fundamentals of Cost Accounting	April 29th
Accounting I	April 30th
Advanced Cost Accounting	May 1st
Accounting II	May 2nd
Industrial Organization and Management	May 3rd
Business Mathematics	May 6th

Candidates are reminded that applications for writing examinations must be filed by April 1st next accompanied by the prescribed fee.

Members of Cost & Management Institute can obtain forms from R. Herron, 1201 The Royal Bank Building, Montreal, Que.

Members of Society of Industrial Accountants of Alberta can obtain forms from Mr. F. H. Ougden, R.I.A., 540-9th Avenue N.E., Calgary, Alta.

Members of Society of Industrial Accountants of British Columbia can obtain forms from Mr. C. H. Davis, R.I.A., Terminal City Iron Works Ltd., Vancouver, B.C.

Non-Resident Members and Members of Society of Industrial and Cost Accountants of Ontario can obtain forms from Mr. J. N. Allan, 66 King St. E., Hamilton, Ontario.

Current Legislation

By ADAM ZIMMERMAN, B.A.

Recent Orders-in-Council

It is becoming rather awkward to follow the Orders-in-Council recently promulgated as they refer to previous Orders by number and section rather than by text. This practice requires constant reference to a comprehensive index. For example, Order 7430 amends the National Selective Service

Civilian Regulations (Order in Council 2796) as follows:—

1. Section 202 (a) is revoked

2. Sections 204 and 205 are revoked and the following substituted therefor:—

204. Where an Employer takes an Employee into Employment he shall:—

(a) record the prescribed particulars of the employment on a Notification of Hiring in prescribed form,

(b) within 72 hours of taking the employee into his employment mail or deliver a copy of the Notification of hiring to the local office, and

(c) retain a copy of Notification of Hiring on file.

205. No employer shall retain an employee in his employment during any day after the expiration of the period specified in paragraph (b) section 204 of these regulations unless he has complied with that paragraph.

3. Sections 205 (a), 206, 207, 207 (a), 208, 209, 210, 210 (a), 210 (b), 210 (c), 210 (d), 210 (e), 211 and 211 (a) are revoked.

Foreign Exchange Control Board—The regulations of the Board are now amended by revoking sub-paragraph (ii) of paragraph (d) of Regulation 13 and substituting the following "United States dollars in the form of postal notes, money orders, cheques or other items of similar nature in an amount not exceeding \$100.00 in United States currency; Provided, however, that no authorized dealer, post office or other special agent of the Board shall sell United States dollars under the provisions of this paragraph except in cases and for purposes which are within the authority of such authorized dealer under instructions from the Board.

Replacement of Civilian Suits—Order in Council 590, becoming effective 31st December, 1945, and repealing a prior regulation, is the authority for granting priority to Veterans for civilian clothing. The order is quite comprehensive, conferring power in the Board to grant certificates for clothing, and contains the mandatory provision (section 3) that every retailer who sells suits and every manufacturer who sells made-to-measure suits and every merchant tailor and every fabric wholesaler selling to merchant tailors shall at all times give priority to sales against certificates.

Repayment of Subsidy—The Repayment of Subsidy Order provides, inter alia, that every person shall, before exporting any subsidized goods, repay the subsidy involved by paying to Commodity Prices Stabilization Corporation

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Limited, an amount determined by such Corporation to be equal thereto. To facilitate trade, Order in council No. 7460 was enacted 28th December, 1945, and now provides that the Corporation may, in its discretion and on such terms and conditions as it may specify, vary the time within which payment required under the regulations must be made, in which case payment shall be made within such time and in accordance with such terms and conditions. By this measure an Exporter of subsidized goods may derive the advantage, resulting from the discretion of the Corporation.

Foreign Trade;—The avenues of foreign trade appear to be broadening. The Secretary of State of Canada has given public notice that trade may be resumed with persons residing in China and such notice constitutes permission to re-open trade in that territory. Any person who engages in such trade shall not be deemed to be trading with the enemy but such persons are cautioned that, because of lack of shipping, lack of foreign exchange, and problems of communication, considerable difficulties may be encountered.

Maximum Prices have been established for certain articles, including Brooms made from broom corn, Whisks, Canada Western and Eastern yellow and white corn, canned poultry, imported lima and red kidney beans, men's, youths' and boys' outer garments manufactured for a retailer on a cut, make and trim basis, tires and tubes, imported canned lemon juice, fur lined and fur trimmed gloves, mitts and gauntlets, oranges.

Current Literature Digest

By Harold Bricker, C.G.A., R.I.A.

REMINISCENCE AND NEW YEAR RESOLUTIONS

Now, that we have had a peak at the New Year 1946, we can begin to reflect as to whether the OUTLOOK is as GOOD or as BAD as we anticipated.

How far back can you remember? We have come across some information on pre-war tax procedure and recording which we contend was much worse than some of our present day and recent war-time taxes. Do you old timers recall some of the following?

Under the heading of STAMP TAXES.

Two cents for the face value of every bill of exchange, cheque, note, drafts, etc. up to \$100.00, and two cents for every additional \$100.00 or fraction thereof.

Ten per cent, on the purchase price on personal wearing items, Hats in excess of \$7.00; Ties in excess of \$1.50; Petticoats in excess of \$12.00; Trunks in excess of \$40.00; Fur coats in excess of \$200.00, in all cases, each. These are just a few examples of the long list.

Fifteen per cent, on oriental rugs and furniture of especially fine quality and expensive.

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Twenty per cent, on smokers accessories, silver and gold ware, and fountain pens over \$5.00 each.

Fifty per cent, on articles of gold not otherwise provided for, except gold pen nibs.

We have complained of the present day taxes but they are really much simpler from an accounting point of view than the old type of stamp taxes in effect during world war one and the period after that war.

Let us be thankful for that!

Inventories

It is rather late to comment on the method of taking inventories but it is not too late to consider whether our inventory taking was carried out according to plan and is satisfactorily completed. Were there any "bottle necks" in our inventory taking?

Inventory taking, in retail establishments in the chain store class, has been scientifically organized on a practical and efficient basis. The same cannot always be said about industrial organizations of the smaller class, and especially where small items of raw material, work in process, finished component parts and finished goods, are necessary stock in industry.

If the inventory values are computed and checked so that the figures can be used for statement purposes, a good job has been done. On the other hand if it is not ready, this is the time to examine the procedure of inventory taking in our organization and put on record the alterations to the present procedures so that "efficiency" may be experienced on the next "inventory taking" occasion.

In "The Quarterly Review of Commerce" current edition, there is an article, an address by Dr. Benjamin Higgins, Professor of Economics, McGill University, under the heading of "Business and Economics". There are a number of particularly interesting observations that might be noted for the benefit of our readers.

The purpose of his remarks were to analyze the expressed reason for business mistrust of economics, to state briefly some reasons why economists, in turn, have misgivings regarding business and, finally, to present some suggestions as to how mutual distrust can be eliminated and a united front established.

A surgeon who has himself had appendicitis may possibly perform a more perfect appendectomy than one who has not; but most people would rather have their appendix removed by a surgeon who had never had appendicitis than by someone who has had appendicitis but who has not medical training. In the same way, a detailed knowledge of the problems and administration of a particular business is not equivalent to understanding of the economic system as a whole, and only the specialized training of the economist is really adequate for dealing with general economic problems.

It is also true that the study of economics may lead to no immediate increase in business profits, and that recommendations of economists sometimes reduce profits. However, "practical" and "profitable" are not synonymous.

Some policies are practical even if painful for business; and there is surely nothing "practical" about loose or wishful thinking, or short-

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sighted selfishness, or ostrich tactics. Economics has shown its practicability in wartime control . . . it has worked, because for once it was given a chance.

Some business men object to the use of abstraction in economic analysis. Abstraction is, however, essential for scientific analysis of any kind. The sin of the economist is not that he makes abstractions, but that he sometimes does not resist the temptation to make policy recommendations on the basis of models that are still abstract. And, by the way, in economics nothing is "all right in theory", that "won't work out practice"; if it won't work, a theory is either incorrect or incomplete.

The business man is inclined to think that economics is a matter of opinion, whereas it is rather a matter of rigorous analysis. The business man's failure to understand this fact is, perhaps, one of the major reasons for lack of sympathy between business and economics. What is essential in economics is that the scientific basis of conclusions reached should be recognized and respected.

The basis of the misgivings concerning business men on the part of Professional economists, consists of a feeling that the business man makes his decisions in terms of advantage to his firm, rather than in terms of social welfare; that he lacks an objective and scientific approach to economic affairs and consequently, too easily identifies the welfare of the economy as a whole with his own profits. Economists feel that few business men deliberately sacrifice profit in order to improve the lot of the consumer or the worker. So long as such attitudes are expressed by business men, the economist, who is interested in maximizing standards of living of society as a whole, will naturally feel that control of economic life cannot be safely left to business men alone.

As the business man learns more economics, he will understand that unless the problems of unemployment, waste of resources, and maldistribution of income are solved, business itself is not safe. "Poverty anywhere threatens prosperity everywhere".

To eliminate the barriers between economics and business, one thing will be needed, namely, agreement as to economic objectives. There is no doubt in that these objectives add up to long-run prosperity for business, as well as for the community as a whole.

These viewpoints can be observed in the preparation of our 1946 programs of operation, only with profit.

Accounting For "Costing"

We are busy, very busy, in reconversion activities. We are trying to get our production plans organized so that we can obtain cost figures. Since many Canadian industries will be interested in exporting, it is a question whether we are informing ourselves sufficiently on the costing methods of our competitors in foreign countries and in other Empire countries. There are some timely comments in the English "The Accountants' Magazine", under the title of "The Cost of Costing", that are worthy of note.

Reviewing the period of before, during, and after the war period, the method of payment for goods varied from the cost-plus system, through various methods, to fixed price contracts and maximum price bases. In all

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cases "Costing" was an indispensable aid, if only as a check upon the relative efficiency of individual firms.

Because of the inadequacy of the costing records in many producers, the problems of price-fixing for munitions was made still greater.

It was remarked that it was quite an eye-opener to learn how few of the best and biggest companies kept anything like adequate cost records. One could not blame them in war-time, but, it appeared that many of them even in peace-time lacked adequate cost records.

We often wonder how our foreign competitors have taken business from us on the tender or competing basis. It is enlightening to hear or see an opinion that business is gained by foreigners through the diplomacy of learning the lowest tender through social approach and then tendering at a price per unit less by one cent, one dollar, or one hundred dollars, depending on the type of transaction.

Our war production experience has verified the fact that commercial representatives were not in the position, before the war, to scientifically establish or fix prices. Trade volume was tempered by the condition of prices being either too high, thereby killing the market in the first place, or too low, rendering the provision of proper depreciation and obsolescence, —and other important overhead considerations,—a virtual impossibility.

As long as the revenue produced a balance on the right side of the profit and loss account and there was no serious competition, this condition was considered satisfactory or sufficiently profitable. However, from now on, due to the experience gained from war-time learned efficiency and the speeding of world wide communications, stable price levels established on scientific production and organization will be demanded and anything else will fail in accomplishment of business.

Export trade, especially in England, is no longer just another source of foreign currency; it is an absolute necessity if we are to maintain the national standard of living. Under these demands, in the foreign commerce of the future, cost and industrial accountants are destined to play an increasingly important part. The cost of maintaining cost records and statistics cannot be taken lightly; it must be within reason. It is pointless to keep statistics for statistics' sake only. In any company the expense of cost keeping must be reasonable. Accountants should be careful not to over-elaborate the technique of cost recording by insistence upon adjustments and apportionments which could be comprehended by only the few.

To produce cost reports and statements it is still possible to frame the financial books and accounts in such a way that they will provide the most important and vital information for normal costing or that it may be broken down for the required purpose.

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City..... Province.....

Controlling Costs in Machinery Manufacturing

Presented by NORMAN TERRY, C.G.A., R.I.A., before the
Victoria Chapter, Society of Industrial Accountants of B.C.

The maximum value of any system of Cost Accounting is a system planned to give management accurate information promptly that can be utilized in every department of the business. The Sales Department must have selling prices up to date—in detail—and which will provide a reasonable margin of profit. The Production Departments require material costs and production hours for varied operations to compare the efficiency of the varied manufacturing operations—and quite definitely as speedily as possible. The general Superintendent or Manager requires all of the foregoing—plus trends of indirect expenses—daily, weekly, or periodically (production in pounds and tons or units). The Comptroller or Treasurer is vitally interested in changes in the value of work in progress, variations in actual costs to estimated costs and a general picture of the financial trends in the Company's production progress.

To co-relate this important information, vitally needed for any Company's success, is the task of the Modern Industrial Cost Accountant. It is important that he has a thorough understanding of the fundamentals of general accounting, essential that he have a thorough grasp of the Company's products, particularly its production routine and to be successful, should be closely associated with Management to follow the principles of the Company's policy regarding quantity and quality of production, profits, margins, etc.

The success of any business is based upon, first carefully planning the general program of the Company's activities, second, working out production details, schedules, etc., and third putting the plans of the business into effect, controlling all its activities so that from the result of all operations a profit will result. The details will vary in every business, but as my association has been in the production of machinery, I hoped that some of the fundamentals of successful Cost Accounting might be reviewed by my recounting my observations of the problems of controlling costs in machinery manufacturing.

Not necessarily in the order of importance, but usually all present in the average manufacturing plant, the following routine should be followed carefully by the Industrial Accountant.

1. Estimating the proposed job.
2. Preparing the quotation.
3. Manufacturing the product (if sold)
4. Recording costs of the operations
5. Reviewing the result with explanations
6. Tabulating in summary, for future reference.

During the past 10 years industry has witnessed at least three cycles. First 4 years 1936-1939, which the income tax department has established as the "Standard Period": and which, according to the reports filed with the Board of Referees of the Excess Profit Tax Act, was the period when most businesses were depressed. Second, the war period 1940-1945 when for nearly six years industry was geared to maximum production, high wages

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low efficiency, and spectacular costs. Third, the period since "V.E." Day and the days to come, when industry is rapidly changing to commercial production and the principles of private enterprise and open competition will hold sway. Naturally today's problems (those of tomorrow) enlist our interest, especially the place of controlling costs in business operations so let us examine some of the phases of the subject.

1. Estimating

Many industrial plants well equipped to produce articles unthought of before are anxious to keep their machinery in top production, have hired an enterprising Sales Force, who bring smiles if not joy to the Sales Manager, with bushels of enquiries for this and that, which the Sales Force are positive can be manufactured successfully. Then comes a general huddle of the engineering, production, sales and I hope the Cost Accounting Departments to estimate the details of the design, specifications, costs and selling price of the proposed equipment to be sold and then produced. It is at this stage that the efficient cost department should get into action and prepare in proper records the estimated details. For machinery production such should include engineering costs to prepare working detailed drawings, including Draughtsmen's time, and a time schedule when it is estimated the blueprints will be completed for the Production Departments. Frequently general assembly drawings must be prepared to assist the Sales Department secure the order. Management should decide whether the costs of such should be charged to Sales or Administration expenses, so that the cost accountant can prepare his figures accordingly. Next, with new production, patterns will be required and estimated costs of making patterns must be recorded. Again Company policy will determine when pattern costs are to be included as part of production costs or capitalized and production costs charged through an adequate program of depreciation write offs. The estimating of the manufacturing of the proposed equipment is most important and the competent cost accountant will be interested to see that wherever possible all activities of the production are recorded with full description of the material proposed to be used, the labor costs calculated by the production department with estimated periods for completion of each section of the job. Care should be taken to allow for a percentage of losses, time for proper inspection and testing as well as assembling and probably installation and servicing on the job. To calculate the cost of wages when given the production hours is relatively simple, as should be the cost of materials to be used. Coming to the question of overhead costs, whether to be calculated on production wages, production hours, machine hours etc., is a big subject which could take a whole evenings discussion. However, the Cost Accountant should decide which system is best applicable to his Company's operation and use the same for both estimating and recording the actual costs, review with Management, the inclusive of administration expense and the percentage of profit expected and the basis of preparing an estimated quotation can be completed. Probably in an organization of some size an estimating department would take care of all the foregoing details, but with rapidly changing conditions of today and tomorrow the work of the Cost Department will be closely allied if not an integral part of its functions.

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2. Quotation

Preparing a quotation of intricate machinery and equipment is naturally the work of the Sales Engineer. Full explanations of the specifications of the materials entering into the construction are described and possibly illustrated. The selling price of the equipment proposed and possibly with one or more alternatives will be included in the quotation together with the anticipated delivery, if awarded the contract. It is good business for the cost department to secure a copy of the proposal, first to check the details with the estimated figures and later if when the order is received to check with actual production details.

3. Manufacturing Routine

As orders are received and contracts awarded on the basis of the quotations previously submitted another conference with the heads of the departments may be essential to plan details of production. A well organized system of production control is so closely allied to the functions of controlling costs that I can best explain their dual operation by referring to a system operating successfully in a local machinery manufacturing company. This Company has the following departments: Engineering, Patternmaking, Brass Foundry, Iron Foundry, Welding Shop, Machine Shops together with general stores, Shipping, Purchasing and Accounting division. Shop work orders are issued by the Production Dept., office copy of the general order going to each of the foregoing departments, each department's copy being a different color. Each shop order specified the essential details of the order but most important specifies the final date that each section of the job should be completed such as drawings, patterns, castings, etc and the deadline of the complete job.

Attached to certain copies of the Shop work order is a detailed material list specifying each part with pattern number, drawing number, etc., and the type of material to be used. The material lists go to the engineering department, stores dept., purchasing department, General Superintendent and the production department. There is provided on the material list, space to record as special material is ordered with purchase order number, company, and date ordered, together with the date and amount material is received into general stores, ready to be used on the job. Also attached to the Shop work order copies going into the manufacturing departments such as foundries, welding and machine shops is a detailed production list. On this sheet is listed all the parts to be manufactured, specifying the item in detail, part number, drawing number and then the routine of production operations such as marking off, planing, boring, drilling, etc., also is provided a space to mention jigs to be used, the machine to do each operation, with further columns for special operations (instructions). Kept in the production department and maintained in co-operation with the costing department are time schedules. Here is recorded the job again in detail, listing each machining operation with the estimated hours to do each process. Again there is recorded the actual hours on each operation posted daily as they occur so that the production department can ascertain as the job is progressing how close the actual production is keeping up with estimated time schedules. You will appreciate that where standard articles are being made that one repeated frequently, close watch on these details are invaluable

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to keep the various production departments in line with previous results. Where equipment is being made for the first time care is equally important, if not more important, to keep costs close to the estimated figures. Getting to actual details. The engineering department understanding the importance of maintaining production schedules prepares working drawings in proper sequence which are delivered to the pattern shop for pattern manufacturing, the machine shop where machine work should be started and to the purchase department where special materials must be ordered. As castings cannot be moulded without patterns, the pattern shop speeds the manufacture of any new patterns needed, watching carefully the production schedules on the shop work order. To assist the pattern and foundry departments the production office prepares moulders work order cards which this Company has found invaluable. The card is perforated into three sections giving essential details on each section of the card. One section is attached to the core boxes and goes to the core department, specifies the job number, pattern number, description of the casting and the number of each core to be made. The next section is attached to the pattern and goes to the moulder which also specifies, job number, pattern number, description, number required, approximate weight of casting, date issued, and date castings must be completed. The third section goes to the cleaning or chipping department giving similar information plus the destination of the casting when completed, such as to shopping department, general stores, machine shop, etc.

A similar routine card is prepared for each group of parts or part on the job for use by the welding and machine shops. These cards are also perforated into 3 parts. One section is fastened to the material for recognition until assembled into the finished unit or sub assembly. One section stays with the foreman for planning machine loading and general production scheduling. The third section is kept by the employee while working on the job as it specifies all essential details. On the second and third section of the card is listed the job number, pattern number, drawing number, etc., description of part and material to be used. Next is the routine of machining process listing each production operation in proper sequence, together with estimated time to do each piece and a place for the inspection to indicate approval before going on to the next operation.

Each week a summary of all jobs incompletd, representing a list of work in progress is prepared. This summary shows clearly where orders are keeping up to schedule and gives warning signals for those going behind. A meeting of the heads of each department is frequently called, the entire picture is reviewed, with full explanations where necessary, schedules revised if essential, customers notified if important and everyone responsible made to realize the importance that his department shares in the complete job on hand.

4. Recording Costs

As the production department follows the physical progress of each manufacturing operation, the cost accounting staff records the financial details of each transaction. As intimated as each work order is put into operation by the production department, it is known by a distributing job number. These are allocated in sections for varied classes of the company's products but copies of the detached material lists are filed with the cost

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department to verify that the job is charged with all materials specified. There is set up a cost record for each job on which is entered all the cost data as information is received by the accounting department. In this system the cost records "tie in" or balance with the general financial records.

First, the recording of labor costs.

In the iron foundry the employees receive detailed instructions of the work to be done by the foreman who also presents the worker with an individual work order card. During the day as each job is finished the employee completes the iron foundry time card on which is listed 17 foundry operations and upon which he makes a cross opposite the operation he has completed. If he is moulding, or coremaking he also specifies, in the space provided, the job number and pattern number, which is obtained from the work order card, issued by the production department. He signs his name, clock number and time spent on the operation and deposits the time card in one of the several boxes located throughout the foundry. He completes a card for every new job or new operation. These cards are collected at the end of each night, checked by the chief time keeper in the time office against the punch clocks. This is to assure that correct time has been reported to agree with the total time worked according to the time clock. The cards are delivered to the cost department by the time office. Here the cards are again test checked for time and price from payroll records extended, sorted, and filed in the case of moulding and coremaking, into job numbers; and for other operations under the operation specified. In the system followed, and based on years of experience in developing foundry cost records, moulding and coremaking is considered production labor. In keeping with modern trends the employees are paid fortnightly so at each 2 week period the productive labor costs (moulding and coremaking) are totalled by job number and the other time cards added under their distinctive operations. A summary of these labor costs are totalled for the period, and checked and verified against the total wages paid at each pay period for that department.

The hours and labor costs of the foundry productive labor are entered at the end of the pay period in the labor cost columns on the cost record ledger under each designated work order or job number.

In the brass foundry, pattern shop and welding shops all operated as separate departments, similar operations take place. The employee completing each operation fills in a designated card from the production routine card, and it is collected, checked, priced and verified against the payroll records and the productive labor costs, posted fortnightly to the designated job cost record in the cost ledger.

Due to the multiplicity of operations and machining processes in the machine shops and the volume of production, the system is slightly modified. As the machine operators start each day they apply at the foreman's wicket and receive from the foreman's assistant full information of the job to be done. This always includes a section of the production record card, (prepared by the production department) specifying the process or operation with essential information such as job number, part number, drawing number, operation etc. He will also receive a time card with all essential data prepared in advance and the time card is punched by an electric time clock in space "Time Started". Probably he will receive the blank materials

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or castings to be machined, blueprint, jigs, tools etc., all previously prepared in the foreman's department due to the detailed production system already explained and functioning similar to a scheduled machine loading program. As the machine worker completes the operation the work, passes to the inspection bench and he reports to the foreman's wicket. He returns blueprint, jigs, tools etc., and files record card and time card which is punched by the time clock "Time Finished". The worker is handed similar information for his next job, prepared in advance by the foreman's staff. These time cards are extended, checked by the time keeper with the main punch clocks and delivered to the cost department. Here they are proof checked for time against the payroll records, priced and extended and filed under each job number until the end of the payroll period. Non-productive labor such as helping, watching, etc., also file a time card into the time office, and as received by the Cost Department are filed under the specified operation until the end of the pay period when they are added together and proved with the payroll records. At the end of each period the total hours and cost of each job are extended under each specified job in the cost ledger.

The foregoing briefly describes how labor costs are collected, proved and recorded to each job or operation.

Next the cost of materials.

As far as iron and brass castings are concerned these are handled differently to other materials and the whole matter of our foundry cost system is a subject in itself and time will not permit full detail. However, the section of the production cards filed with the chipping or cleaning department are invaluable in assisting proper recording of all castings produced. A daily foundry production report is completed for each foundry. These reports are designated to show the job number, part number, description of the casting completed, the rejected castings by number, weight and total weight, then good castings by number, individual weight, and total weight and then a column for the cost value of the castings. At the present and based upon periodical checks we found our iron casting material, that is cost of iron melted exclusive of labor cost, at three cents (3c) per pound, while our non-ferrous, brass castings which are recorded on a daily report similarly are priced at twenty (20c) cents per pound. The details of the daily reports are verified by the foundry foreman who signs the report. The reports are delivered to the cost department and from which the castings made are charged against each job on the cost ledger. At the end of the period the casting columns of each job are totalled and a grand total verified with the total of all of the daily foundry reports to prove all items have been properly entered. The cost accountant having before him a detailed material list for each job can see that no castings are charged to the wrong job and also can see that each job is charged with its full allotment of castings.

Except for mass of detail the recording of materials used is comparatively simple and is probably similar to most production plants.

The general stockkeeper prepared a daily report of all materials leaving the stores and used in every department. A store requisition is prepared by each foreman as he needs the various material for production of each part and from these requisitions the detail of which is checked against the material list for each work order (provided by the production department)

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the storekeeper completes his daily report. The job number, part number, description of the material and quantity issued is specified and is sent to the cost department for pricing. A perpetual inventory is maintained by the cost department which is kept up to date daily; first by entering all goods received into general stores as reported by the stores department daily. These are priced by the purchasing department from purchase invoices which must agree before being approved. Materials out of stores are deducted from the card records and the prices and costs of all material taken from stock are secured from perpetual inventory cards. From the daily materials out-of-stock reports, the cost department posts the material cost details to each job record cost sheet in the cost ledger. These totals are subsequently checked and proved at the end of each period, the cost accountant checking details with each job's material lists to ascertain that the correct material is entered.

The foregoing briefly explains the manner in which the various cost elements are entered to each job on work order, that is labor and material costs.

Next is the question of overhead cost.

Naturally in order to obtain the total cost of each job from day to day it is necessary to estimate overhead costs as closely as possible. In each department a different factor is found to be necessary and the figure used must vary as it is proved that actual overhead costs fluctuate.

In the iron foundry we find overhead varies with the number of production hours (moulding and coremaking) and at present works out at two dollars (\$2.00) per production hour. So that if a casting weighs 200 lbs. and requires 3 cents per lb. for materials (or \$6.00) plus eight hours at \$1.00 per hour moulding wages (\$8.00) plus overhead eight hours at \$2.00 per hour or a total of \$30.00 for the finished casting. From experience it has proved that estimating iron castings at a flat price per lb. or even on a sliding scale the pound price reducing as the casting is heavier, is very unsound costing procedure. In the brass foundry, pattern shop, welding shop and machine shop allocating overhead on the basis of productive hours has proved to be satisfactory, instead of distributing on the basis of a percentage of productive labor costs, due to the variation in wages rates paid for operating similar machines and operators.

Naturally periodically the estimated overhead figure is checked with actual overhead costs and if a substantial variation exists then an adjusted figure is used so that the cost figures will be maintained as accurately as possible.

At the end of each period the cost details are totalled on each job record sheet and the monthly totals tabulated on a monthly synopsis. For jobs in process the months before, the previous month end totals are listed in a column provided, next production labor totals, overhead figures, materials used, and casting costs in labor overhead materials. These columns are totalled and then distributed against each job number to work in process column for jobs incompletd, stores columns for materials manufactured for stock, other special columns such as repairs etc., and the final column headed cost of sales for all jobs completed. This summary sheet should

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cross balance and the total of all columns should also be proved and verified with the costing accountant.

From the cost record synopsis, journal entries are completed and posted to the general ledger account and from other general accounting records monthly manufacturing statements and profit and loss reports can be readily completed.

5. Reviewing

From the data prepared from the foregoing system the cost accountant can provide management with actual figures promptly. As each job is completed, or during its progress if necessary, accurate and actual results can be presented. This information is invaluable to check and verify with estimated figures used in preparing the original quotation, as the information is compiled in the same general sequence. The estimated can be compared against the actual and where necessary corrections made to keep future quotations in line with actual results. From the actual cost records detailed figures, cost of parts or special operations can be re-listed under any type of cross index system such as the kind of machine, the size and type of equipment, etc., for ready reference and for future needs.

6. Summary

In it is obvious that the cost accountant with a complex problem—an all absorbing one which calls for patience, tact and ingenuity. The success of any method of controlling costs can be measured by actual results. If the information is secured accurately and promptly so that management can visualize the actual results in their various production departments, then the cost accountant has proved an essential part of the organization. In the days that lie ahead when industry of all types are entering into the manufacture of various new products using materials unfamiliar to their previous experience and operating machinery foreign to them, the need for accurate cost control will be needed. The opportunity is waiting for those that are prepared to meet their challenge.

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Standard Costs

By A. F. Gurr, Cost Accountant, Consolidated Paper Corp.

An Address Before the Ottawa Chapter

Here's what the Encyclopedia Britannica has to say about Standard Costs—

"The Standard costs system also known as predetermined or budget costs, is a comparatively recent movement in cost accounting; its chief point is estimating the cost of the product before it is produced. This estimate is frequently made by the Engineering Department, and consists of estimates of the cost of materials to be used, of the direct labour involved, and of the overhead expenses. For proper efficiency these estimates should be made in very great detail, in accordance with the plan or process of manufacture of the product. The costs of actual manufacture are then gathered by the accounting system under the same titles as were used in the making of the estimate; these are compared with the estimated or standard costs and the variations, or variances, as they are usually called, are noted and the attention of the responsible executive is given particularly to these items where these are greatest. In this way, so long as the costs of manufacture fall within the limits set by the estimated manufacturing standards, the results are considered satisfactory and no special attention from executives will be required, and hence they can devote their undivided attention to conditions shown to be unsatisfactory. As yet there is no uniform accounting technique for this method, but its basis has gained rather wide acceptance owing to its great value from the standpoint of management".

To my way of thinking, whoever wrote this synopsis of Standard Costs did a very masterly job in saying so much in so few words because if you consider each phrase and sentence carefully, you will find they are packed with meaning. I suggest you study them at your leisure.

Now, we'll look at the subject in more detail—

First of all, just what are Standard Costs?

A Standard Cost is, literally, a fixed predetermined cost of an operation or product. This fixed cost represents a yardstick with which to measure the success of past operations; it is a guide by which to regulate present performance and it serves as a goal by which to set future estimates.

Standards must be established on the basis of past experience, present conditions, and future expectations. That is, the average experience during normal past periods, usually three to five years, is considered as the average course of the business. Abnormal conditions, peaks, and exceptional depressions must be weighed in order to establish a normal or average for the past. Likewise, undue elements of the present must be weighed to give balance to the present conditions, and the normal future course must be plotted in order that the standards may adequately represent the business programme.

Cost standards may be established either as job costs or process costs but no matter which, they must take into consideration the following elements of production costs based on planned specifications and objectives

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stated in the following terms for each component part, process, assembly, or finished product—

1. Materials specifications—which include class, quality, size, and so forth of new materials, or the part numbers of component parts or sub-assemblies.
2. Quantities of raw materials, or the number of parts or sub-assemblies required.
3. Material unit prices for each specification.
4. The required operations and processes in sequence, with allowed times per production unit for each operation or process.
5. The number of operators and hours of work required for each operation or process.
6. Man hour rates for each occupation.
7. Burden rates per production unit at normal levels of production.

To illustrate—say we are making a commodity, almost any commodity, and want to determine a standard cost.

First there is material—there will be so much of this and so much of that at standard prices.

Second—labour; maybe two operations, one requiring 10 man hours of direct labor and the other 12 man hours, each at standard hourly rates.

Third, we have the machines used to process the article, one for the first operation and the other for the second, each carrying a machine hour overhead at standard rates.

Lastly, there is General Overhead that must be absorbed at a standard rate probably fixed at so much per hour.

The result of these four calculations is to give us a standard cost for material, one for labor, one for machine overhead and the other for general overhead. The total then, of these four items, is the yardstick for measuring the actual costs of producing the commodity, and the various component standards for materials, direct labor, and overheads are the yardsticks by means of which the actual costs of these four components are measured.

It should be noted that these standards may be both quantity as well as price standards. That is to say, not only may the prices of materials and hourly wage rates be standardized, but the quantities of materials and number of man hours also. The same applies to the overheads.

In dealing with **Standard Material Costs** where shall we start? Shall it be with the inventories of materials and stores, or with the materials and stores as these leave the storeroom to go into production?

If we start with the inventories, we shall have to show these at both actual cost prices and at standard prices; that implies that each invoice for materials purchased must show standard pricing or values in addition to the actual purchase cost. The stores ledgers will then show inventory balances, additions and withdrawals at actual cost and at standard cost; requisitions for withdrawals will also have to be costed both ways.

The need for this procedure is apparent when we remember that actual costs must always be known and determined under any plan of standard cost accounting.

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Standard Material Costs

Supposing our commodity requires two types of material and because of fluctuations in purchase prices the actual price of one is greater and the other less than standard. This means that there will be variances which should be charged or credited to a "Material Price Variation" account. Again, suppose for some reason more of one material is required than the standard provides—the additional quantity would be charged to a "Material Quantity Variation" account, or credited, were less material than standard required.

Standard Labor Costs

Just as materials used may be above or below standard usage, and may also show a price variation, so the actual number of man hours may exceed or be less than standard hours and the labor rates may also vary. These differences would be charged or credited to "Labor Usage Variation" account or to "Labor Rate Variation" account.

Standard Overhead Costs

In allocating factory overhead to the commodity, we may also encounter differences or variations between the standard rate and either the actual overhead or a ratio set for current purposes. The differences would be charged or credited to "Overhead Usage Variation" account or "Overhead Rate Variation" account.

Now the result of all this will be to show wherein the actual cost varies from the predetermined standard. Differences will be owing to price and rate variations or usage variation. They will indicate where action is necessary to eliminate dangerous situations or remedy inefficiencies.

It should be borne in mind, at this point, that even though the charge to Cost of Sales is at standard cost, the variation accounts are always there to disclose the differences between standard and actual costs, and that the periodic profit and loss statements will contain the adjustments needed to show the actual costs; the variations from standard will be a part of those statements and may appropriately be deducted from or added to the standard gross profit, especially in those cases where standard selling prices are used on the Profit and Loss statements.

General Considerations

The standard costs system I have tried to describe proposes fixed standards as measuring devices only, thereby disclosing the variations, either up or down, of actual costs from standards. An additional yardstick might be provided. That additional yardstick might be an efficiency standard, or an efficiency index, which will also show the actual costs in contrast to a more or less ideal cost.

We should never forget that actual costs, under hundreds of varying conditions of production, many of them indicative of considerable shortcomings and errors in practice, are not necessarily real costs. Real costs are costs as they ought to be under the best possible operating conditions, after, of course, making due allowances for unavoidable errors and shortcomings.

In using standard costs, one naturally has appropriate efficiency tests in mind to use to assist in bringing about needed changes in manufacturing conditions. However, it is not the practice to consider true costs as the basis for production values—in the long run we must get back to actual costs

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for inventory purposes, even though we might know what true costs are and how the actual costs vary from true costs. After all, the important thing in manufacturing is not to know how actual costs vary from a fixed, measuring device, but how far actual costs are at variance with true costs; i.e., costs as they ought to be.

Why not use true costs as a standard? A "True" cost standard would answer all purposes but it could not be a fixed standard because "true" costs change with every improvement in manufacturing methods.

EFFICIENCY COSTS: True costs, or efficiency costs, are those representative of the best possible use of materials, labor, and plant facilities, both quantitatively and qualitatively considered. That means the best possible use of plant, at the best possible cost.

Whether or not price standards for materials and standard labor rates should be used would depend entirely upon the nature of the control over purchasing and labor. If a standard is to be used which is to find its way into the inventories, as representative of a correct cost, actual costs of material and actual direct labor rates should doubtless be used. If they are not used, we would have to assume that the purchasing agent and the employment manager are able to influence the costs of materials and the price of labor. Such an influence may exist in isolated cases but it is not general; a system should hardly be created on the basis of exceptions. At any rate, there are other methods of controlling these things or knowing about them; they need not, therefore, be considered as an integral part of a standard cost system.

Assuming that prices of materials and labor rates are not ordinarily under the control of purchasing agents and employment managers, the most important factors to be considered in fixing an efficiency standard for materials and labor are quantitative in nature; that is, the number of units of materials and the number of hours of labor are the essential considerations in fixing material and labor standards on an efficiency basis.

When we come to factory overhead, we are again confronted with an opportunity to use efficiency standards; that very use will enable us in time to bring about the most efficient use of machinery, plant, power, general factory departments and indirect labor. Thus, a machine should bear its proper amount of depreciation each year and its proper quota of tax, insurance expense and repairs; definite knowledge as to power requirements, machine speed, and advantageous location must be had. All these factors must receive consideration so that an efficiency standard for the overhead allocated to the machine may come into use.

For machine-hour rates, the best possible capacity performance should be used, because that is the goal we should endeavour to attain. Variations from such a standard will be the measure of our shortcomings no matter what they may be. Thus, if the hours of operation, set as a standard for say a year or six months, are not obtained, we may know that the deficiency is due to either a lack of internal factory control and adjustment or to slack business which may be avoidable or unavoidable; the use of the standard will indicate the cause of nonuse or misuse. Nonuse will become a charge to Unearned Burden Account; misuse will be a charge to Machine Overhead Variation Account.

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We must be on guard, at all times, however, when we set efficiency cost standards, that the standards are reasonable and representative of possibilities; they must be judged and fixed in accordance with the plant capacity factor; that's not 100 per cent capacity but the best possible capacity as revealed by an examination of performance capabilities. All factors of unavoidable shortcomings must be considered.

At the same time, the fixing of rates should be based upon the best possible capacity in every sense. This fact cannot be emphasized too strongly. Even though a plant may not ever have been worked to that capacity point, a standard rate based upon any other consideration will not disclose fully one of the most important of all business costs—the cost of idle capacity.

Efficiency Standards Change. Unlike the ordinary standard cost system, which usually employs a fixed standard indefinitely, the efficiency Standard Cost Plan provides for changes in standards in harmony with the changes in industrial methods and mechanization; it is therefore always up to date as a corrective device, it will constantly bring true values into inventories, and it will serve, as all standards do, as an ordinary measuring device.

An efficiency standard does two things at one time—it measures and it serves as an index of efficiency. The usual standard merely measures and, in that case, an additional efficiency index must be provided; we must have these efficiency indices, no matter what plan of cost accounting we may follow. Why not use an efficiency standard cost that serves at one and the same time as a measuring device, a variation base, and a corrective; a cost plan that is flexible and that correctly interprets and expresses the changes that are constantly going on in manufacturing methods?

Now, about my own practical experience with Standard Costs. This has been with the efficiency type of standard costs which I have briefly described but without price standards—no fussing around with standard material prices which may be different from actual prices, or standard labor rates which may be at variance with actual labor rates. If prices or labor rates change, you alter your standards accordingly. In so doing you eliminate price and rate variation accounts and get nearer to real true standard costs. Of course you can't always be making adjustments in standards for the many variations in purchase prices which occur, but if the change is substantial or the material an important one, you will try and keep the standard right up to date. The variations in miscellaneous material prices will probably offset one another and require adjustment only at infrequent intervals, says once a year. In my experience I have not found it necessary to tie-in standard costs closely with the regular books of account in the manner I described a few minutes ago—to carry inventories at standard as well as actual cost and so forth. Some people may find the effort in doing this worth the while but to my way of thinking, the important thing has been to use standards to control costs, and to effect reductions in costs. To do this you must get the whole hearted interest of the foremen and department heads who are responsible for spending your money in the form of labor and materials. It is these men whom you must take into your confidence when formulating standards for their departments and you want just as simple a system as you can devise. The object should be to have department heads,

STANDARD COSTS

under the guidance of the Manager and Accountant, set their own standards and endeavour to live up to them. You may be sure that a man who has something to say in setting his own standards will do his level best to keep his costs within his standards.

I have already explained the general procedure for establishing standard costs. They will, of course, be built around each department or operation in the factory or plant and follow the same line-up as the regular costing system so that comparisons can be made of each individual item of cost with the predetermined standard. Overs and unders are best brought out in total dollars. Some people show variances from standard as a unit cost variance but I don't believe that means as much to a foreman or department head as it does when expressed in total dollars. After all 2 or 3 cents per unit doesn't seem to be very much but in total it is possible for a small unit variance to run into thousands of dollars.

In making our departmental cost reports, to show the comparison of actual costs with standard costs I believe they should be set up in the most intelligent and interesting way possible. This is especially important for cost reports going to the foremen. I suppose many of you produce statements of departmental expense for your foremen and I imagine those statements are usually set up in four columns. The first will be headed "Item", the second "Actual Cost", the third "Standard Cost" and the fourth "Variances". Don't you think it would be more interesting and have a more telling effect on your foremen if the first three columns were headed,

1. These are the items for which you spend money
 2. These are the amounts you spent
 3. These are the amounts you should have spent
- and then have two columns to replace "Variances", one reading,
4. On these items you suffered a loss
- and the other reading,
5. On these items you made a gain.

It is most important that you do everything in your power to maintain the continual interest of your foremen in watching their costs and comparing them with standards. When I speak of comparing actual and standard costs, I mean it in the broadest sense. Costs don't always have to be expressed in dollars and cents—in many cases it is preferable that they be also expressed by comparing actual and standard material quantities, efficiency figures, and percentages; there are various ways of comparing standards which will help to keep your foremen alert and watchful, always striving to better the operation of their departments.

Up to now, all that I have said has had to do with departmental standards but the Management will no doubt wish to have an overall picture. This is a matter of distributing departmental standards to the products made for sale in exactly the same way as actual costs are distributed. Distributions should be made in such a way that the Management can see at a glance what each department has contributed to the overall total variance from standard. The statement should also show the variance divided between variations from standard owing to the efficiency of operation, that is the speed or rate of operation, and variations caused by using more or less material, labor, supplies, etc. than standard. Such a statement will be like

COST AND MANAGEMENT

an open book to the Management to guide them in their endeavours to bring about a consistently high and economical level of operating efficiency.

I do not think it is sufficient for a cost accountant to merely compile cost statements and present them to foremen and Management—the cost accountant's responsibilities go far beyond that. In the maze of figures with which the cost accountant has to deal there lie many important facts which often he alone is able to see and understand. Having compiled cost reports, he is merely a cost clerk who does not at once analyze the result of his endeavours to find these important facts and present them in a readily understood form to foremen and Management for their guidance and action.

During the war, in the orgy of reckless spending necessary to secure quick results, the careful control of costs was in many cases pushed into the background. Now, however, it will pay those of you who are engaged in the application of cost accounting to keep up with the procession. Innumerable accountants have been working for years to install and improve the methods of standard costing. There is an old Arabian proverb which says, "Mankind is divided into three classes—

1. the immovable
2. the movable
3. those that move."

With post war trends in accounting, much thought will be given to standards, but the benefits of standard costing, that is, the close control of operations, and cost reductions which should accrue, will go to those in the third classification—those that move.

« STUDENT SECTION »

GENERAL ACCOUNTING

By H. P. WRIGHT, C.G.A., R.I.A.

ACCOUNTING I.

Question 5. (20 Marks)

(a) Prepare a bank reconciliation statement as at November 30, 1944, from the following information:

- (1) Balance per bank statement, Nov. 30, \$7,488.00.
- (2) Cheques issued but not cashed, \$7,200.00.
- (3) Cheque for wages incorrectly entered in cash book as \$320.00, but paid by the bank and charged on the bank statement in the correct amount of \$330.00.
- (4) Deposit entered in cash book on Nov. 30 but not credited by the bank until Dec. 1, \$650.00.
- (5) Cheque drawn by some other person, but charged in error to your account by the bank, \$57.00.
- (6) A draft for \$120.00 which you had accepted and entered in

STUDENT SECTION

the bills payable book on Oct. 27 was paid at the bank on Nov. 30 and charged on the bank statement, but payment has not been recorded in the cash book.

(b) Submit, in journal form, the entries required to be made in the cash book of part (a) so that the true bank balance will be shown in the cash book.

Solution

Question 5

(a) Bank Reconciliation, November 30, 1944

Balance per bank statement	\$7,488.00
Add: Error in entering cheque for \$330.00 in Cash Book as \$320.00	10.00
Deposit of November 30 not credited by bank until Dec. 1	650.00
Cheque charged in error by bank	57.00
Draft paid by bank on November 30, not entered in Cash Book	120.00
	\$8,325.00
Deduct: Outstanding cheques	7,200.00
	\$1,125.00

(b) Wages	\$ 10.00	
To Bank		\$ 10.00
Bills payable	120.00	
To Bank		120.00

Comments

The preparation of a bank reconciliation is quite familiar to most students, but the solutions submitted clearly indicated the need for further study on the form of presentation. Out of 34 candidates writing this paper only 4 received full marks for this question which is rather a surprising revelation in such a simple problem. This indicates that familiarity with a problem does not necessarily mean full knowledge.

The main criticism to the solutions, apart from the forms of presentation, was lack of care and accuracy. For instance, the date of the reconciliation was omitted by some students and many mechanical errors were apparent.

ACCOUNTING II.

Question 2. (10 Marks)

The reported profits of a certain business for the years ending December 31, 1941, to 1944, were \$89,167, \$160,219, \$143,753, and \$205,502 respectively. In computing these reported profits inventories had been valued at "the lower of cost or market, less reserve" as follows:

December 31, 1940.....	\$56,574	December 31, 1943.....	\$101,295
1941.....	\$83,241	1944.....	\$140,598
1942.....	\$74,682		

The "reserve" in the valuation at "the lower of cost or market, less reserve" had in each year been 10 per cent. of the inventory priced at the lower of cost or market.

COST AND MANAGEMENT

Required: Statement of profits as they would have been if the inventories had been valued at the lower of cost or market without deduction of any "reserve".

Solution				
Question 2				
Item	1941	1942	1943	1944
Profits as stated	\$ 89,167	\$ 160,219	\$ 143,753	\$ 205,502
Add: Understatement of closing inventory (1/9th)....	9,249	8,298	11,255	15,622
	98,416	168,517	155,008	221,124
Deduct: Understatement of opening inv'tory (1/9th)	6,286	9,249	8,298	11,255
	\$ 92,130	\$ 159,268	\$ 146,710	\$ 209,869

Comments

While this was a comparatively simple mathematical problem, many candidates failed to realize that any adjustment to the closing inventory effects, not only the earnings of the year in which the adjustment was made, but also the earnings of the following year by reason of the adjusted opening inventory.

COST ACCOUNTING

Comments by A. V. HARRIS, C.A.

ADVANCED COST ACCOUNTING

Question 1. (17 Marks.)

As a result of an examination of the accounts of B. Company for the year 1944 you ascertain that:

1. The Company has charged as part of manufacturing expense (which is also included in its inventory pricing) interest on investment of \$10,000 per annum. The Company proposes to take the revenue of \$10,000 thus created into its own Profit and Loss for the current year.

2. Manufacturing expenses for the year totalled \$40,000, of which only \$30,000 has been absorbed in Work-in-Progress. The Company has not decided what to do with the unabsorbed balance.

3. Depreciation has been provided at 10% for the current year on the appraised value of the fixed assets, which were written up at the commencement of the current fiscal year by \$80,000. Depreciation is included in costs.

The difference between the amount of Work-in-Progress at the beginning and end of the fiscal year is negligible. Production transferred to Finish Goods in the year is valued at \$175,000, with Finished Goods opening inventory priced at \$60,000, and closing inventory at \$100,000.

Discuss the changes, if any, that might be made in these accounts before preparing final statements.

Solution and Comments

In considering this problem, one of the more important points to keep in mind was the fact that the B. Company had stocked up their warehouses

STUDENT SECTION

in the period from an opening inventory of finished goods of \$60,000 to a closing inventory of \$100,000.

Item No. 1 concerned a charge of \$10,000 in the Manufacturing Expenses for Interest on Investment, which apparently is taken into consideration when valuing the closing inventory. Candidates in examination were quite divided on the proper treatment of this item. A number felt that the Company's proposal to leave things as they stood, and take the credit of \$10,000 into Profit and Loss was reasonable. These individuals would be then taking into Profits something unrealized—since the unsold Inventories contain a certain amount of the Interest on Investment, due to the heavy increase in finished stock. Other candidates felt that the entry was not justified and should be written out of the books—by applying the Interest on Investment Credit back against Production Costs. Many of these failed to realize (or at least to state) that the closing inventories would then require revaluation. The pros and cons of "Interest on Investment" as an item of cost are discussed in the standard cost texts, and the examiner sensed that candidates might not have investigated this subject. The simplest treatment of this credit would seem to be to take to Profit and Loss only the proportion of the \$10,000 which might be considered to have been realized, and to retain the remainder as a credit for "Unrealized Profit contained in Inventory Valuations". The proportion of the \$10,000 transferable to Profit and Loss depending on the Company's established practice and ignoring the subsequent items would be 135/175 or 135/235.

Item No. 2 concerned the underapplication of overhead to production by $33\frac{1}{3}\%$ and since the amount of unapplied burden was very large in relation to the total for the year, conservative accounting would dictate that the adjustment be made to current year production by charging Work in Process account with the additional \$10,000. It would seem likely that any tax conscious management in 1944 might also approve of this procedure. The additional \$10,000 charge would then require to be prorated over Cost of Goods Sold and Finished Goods Inventory on a 135/175-40/175 or a 75/175-100/175 basis.

In this period when D.M. & S. Treasury Cost Memorandum 433 is much in evidence and "Non-Cost" items are under constant surveillance an item such as No. 3 should have caused no great difficulty. Unfortunately candidates did not so recognize it, and many felt that the 10% of \$80,000 or \$8,000 additional depreciation was a legitimate charge. The whole accounting treatment was, of course, "Bookkeeping", and the \$8,000 does not properly appear as a cost of production and should be excluded on the same basis as mentioned for Item No. 2 only, of course, in the opposite direction.

Problem

The Short Company produce a small household article. The Company purchases certain completed parts, manufactures others and assembles the sub units to make the finished article. The accounting has been maintained on an unsatisfactory basis, and the management require a trial balance prepared according to the accepted principles of cost accounting.

The data supplied is as follows:

Sales—(entire output at sales price)	\$1,800,000
Factory Expenses	564,000

COST AND MANAGEMENT

Financial Expenses	15,400
Opening Inventories	Nil
Parts Purchased	81,250
General Expenses	110,150
Material used for parts manufacture	281,250
Direct Labour	351,560
Selling Expenses	201,300
Production of finished articles—cost as follows:	
Parts Purchased	68,750
Material used for parts manufacture	206,875
Direct Labour	285,625
Factory Expense	476,000
Value of Work in Process—cost as estimated:	
Parts Purchased	3,000
Material used for parts manufacture	54,375
Direct Labour	65,935
Factory Expenses	88,000
Inventory of Material used for parts manufacture	20,000
Inventory of Purchased Parts	9,500
Required:	

1. Journal Entries to record the above information.
2. Trial Balance.

Solution

Journal Entries

Parts Purchased Stores	\$ 81,250.	
Material used for Parts Manufacture Stores	281,250.	
Factory Expense	564,000.	
Financial Expenses	15,400	
General Expenses	110,150.	
Direct Labour	351,560.	
Selling Expenses	201,300.	
Vouchers Payable		\$ 1,604,910.
To record various vouchers passed for the period.		
Parts Purchased-in-Process	71,750.	
Material in Process	261,250.	
Labour in Process	351,560.	
Manufacturing Expense in Process	564,000.	
Parts Purchased Stores		71,750.
Material used for Parts Manufacture Stores		261,250.
Direct Labour		351,560.
Factory Expense		564,000.
To record charges applicable to material and labour put in process.		
Finished Goods	1,037,250.	
Parts Purchases in Process		68,750.
Material in Process		206,875.
Labour in Process		285,625.
Manufacturing Expense in Process		476,000.

STUDENT SECTION

Cost of goods finished in period.		
Cost of Sales	1,037,250.	
Finished Goods		1,037,250.
Cost of goods sold in period.		
Accounts Receivable	1,800,000	
Sales		1,800,000.
Sales for period.		

Short Company Trial Balance as at —

	Dr.	Cr.
Parts Purchases Stores	\$ 9,500.	
Material used for Parts Manufacture Stores	20,000.	
Parts Purchased in Process	3,000.	
Material in Process	54,375.	
Labour in Process	65,935.	
Manufacturing Expense in Process	88,000.	
General Expenses	110,150.	
Selling Expenses	201,300.	
Financial Expenses	15,400.	
Cost of Sales	1,037,250.	
Accounts Receivable	1,800,000.	
Vouchers Payable		\$ 1,604,910.
Sales		1,800,000.
	<hr/>	<hr/>
	\$ 3,404,910.	\$ 3,404,910.

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